# AUTHOR INDEX


ABE, S., 139
ALAVANJA, M. C. R., 354
ALDRICH, J. E., 469
ALEXANDER, R. E., 589
ANSPAUGH, L. R., 323
ANTOKU, S., 257
ASHMORE, J. P., 211
ATTIX, F. H., 674

BARABAS, M., 149
BEEKHUIS, H., 287
BENEDETTO, A. R., 230, 476
BENEDITTINI, M., 397
BERGER, C. D., 19
BERNABEE, R. P., 451
BIGU, J., 93
BINNEY, S. E., 73
BLACK, A., 301
BOAMAH, K. N., 161, 167
BRICH, R. F., 99
BRIGHT, E. L., 431
BRODSKY, A., 21
BROWNSON, R. C., 354
BUCHANAN, H. F., 189

COHEN, B. L., 195, 224
COTHERN, C. R., 566
COWDREY, E., 570
CRAWFORD-BROWN, D. J., 566
CUTSHALL, N. H., 571
CZERSKI, P., 227

DELUCA, P. M., 9
DEMPSEY, J. C., 47
DOEGE, T. C., 355
DONNELLY, E. M., 465
DUDNEY, C. S., 89
DVORAK, V., 113

EHRLICH, M., 431
EICHHOLZ, G. G., 229
EISELE, G. R., 323
ENGEL, D. W., 323
ENNIS, M. E., 157, 161, 167
ESSLING, M. A., 517

FAGNANI, F., 397
FISHER, D. R., 352
FISK, W. J., 491
FLEISCHER, R. L., 225
FUJITA, S. 257

GANDSMAN, E. J., 557
GEORGE, A. C., 203
GHILARDI, A. J. P., 669
GHILARDI NETTO, T., 669
GILBERT, R. O., 323
GLASS, W. A., 11
GOFMAN, J. W., 226
GOODMAN, L. J., 349
GROMICKO, N., 195
GUILMETTE, R. A., 503

HAM, W. T., 337
HANDL, J., 83
HARLEY, J. H., 353
HATTORI, T., 139
HAWTHORNE, A. R., 89
HENDEE, W. R., 229, 230, 356
HICKEY, J. R., 47
HIGSON, D. J., 569
HOFMANN, W., 221
HORÁČEK, J., 27
HOSHI, M., 249
HUMM, J. L., 607
HUMPHREYS, E. R., 607

IBRAHIM, S. A., 413
ICHIKAWA, Y., 249
IIDA, T., 139
IKEBE, Y., 139
ISHIBASHI, K., 283

JACOB, P., 617
JANTUNEN, M. J., 354
JOHNSON, J. E., 157, 161, 167
JOKELA, K., 533
JÖNSSON, G., 271
JOSHI, S. R., 63
JURY, M. R., 421

KATASE, A., 283
KATHREN, R. L., 181, 475
KATZ, R., 221
KAURI, T., 107
KEANE, A. T., 517
KNEALE, G. W., 567
KNIGHT, D., 301
KOCH, J., 659
KOTRAPPA, P., 47
KROMER, B., 149
KUDO, A., 107
KUNZ, E., 27

LAM, G. K. Y., 57
LANDA, E. R., 99
LARSEN, I. L., 571
LAUNDRÉ, J. W., 445
LEFAURE, C., 397
LEIB, R., 597
LEVANON, I., 645
LEVIN, I., 149
LINZNER, U., 461
LOGAN, K. W., 475
LÜXIN, W., 222
LUZ, A., 461

MACCIA, C., 397
MAHARA, Y., 107
MAISLER, J. J., 189
MANDÒ, P. A., 207
MARIUTTI, G., 529
MATSUMOTO, Y., 283
MATZEU, M., 529
MCINROY, J. F., 181
MIKLOS, J., 597
MILLER, C. L., 99
MILLER, K. M., 203
MIYAHARA, S., 107
MOGHISSI, A. A., 473
MOORES, S. R., 301
MORGAN, A., 301
MOWRIS, R. J., 491
MUELLER, H. A., 337
MULHOLLAND, M., 421
MÜLLER, W. A., 461
MUNNICH, K. O., 149

NAGATOMO, T., 249
NEEL, J. W., 674
NEWTON, G. J., 503
NICKOLOFF, E. L., 465
NORTH, D. L., 557
NORTHCUTT, A. R., 73

OCHIFUJI, K., 139
OLSON, D. G., 451

PALMER, H. E., 73
PARETZKE, H. G., 617
PASS, B., 469
PELÁ, C. A., 669
PERNICK, A., 645
PLAČEK, V., 27
PLATFORD, R. F., 63
PLATO, P., 597
POGGI, G., 207
PUSKIN, J. S., 635

RAY, D. L., 473
REED, R. P., 89
REICHERT, M. M., 181
REYNOLDS, T. D., 445
RITENOUR, E. R., 355
ROSENBAUM, H., 617
ROWLAND, R. H., 674
RUEMMLER, P. S., 311
RUNDO, J., 517
RUSSELL, W. J., 257

SABOL, J., 673
SAKAE, T., 283

SAMUEL, T., 227
SANCHEZ, A. L., 317
SANTRY, D. C., 107
SAWADA, S., 257
SCHELL, W. R., 317
SCHLENKER, R. A., 383
SCOTT, A. G., 351
SEILER, F. A., 503
ŠEVC, J., 27
SHINN, J. H., 323
SIMPKIN, D. J., 355, 561
SIMS, C. S., 551
SINCLAIR, W. K., 15
SINGH, N. P., 293
SLINEY, D. H., 337
SMITH, D. D., 323
SOARES, C. G., 431
SONT, W. N., 211
STANNARD, J. N., 475
STEWART, A. M., 567
STIEFF, L. R., 47
STROM, D. J., 353
SULLIVAN, M. F., 311
SUTHERLAND, J. K., 69
SWINT, M. J., 181

TADMOR, J., 659
TAYLOR, D. M., 171
TAYLOR, G. N., 293
THORNE, M. C., 171
THOMAS, E., 317
TOMÁŠEK, L., 27
TOWNSEND, L. W., 409
TSCHAECHE, A. N., 565

UEHARA, S., 249

VOIGT, G. M., 157

WALLACE, R. G., 89
WARD, G. M., 157, 161, 167
WHICKER, F. W., 413
WIJKER, H., 351
WILSON, J. W., 409
WOLBARSHT, M. L., 337
WRENN, M. E., 293

YALÇINTAŞ, M. G., 545
YAMAMOTO, O., 257
YAMANISHI, H., 139
YANG, Y., 635
YOKOYAMA, S., 139

ZANKL, M., 617
ZHANG, C., 221
ZIMMERMAN, C. J., 293

# SUBJECT INDEX: VOLUME 54


**Absorption, gastrointestinal**
Uranium-233, Np-237, Pu-238, Am-241 and Cm-244 in rats fed an iron-deficient diet 311

**Abstracts**
Abstracts from the 1987 Annual Meeting of the Israeli Health Physics Society, 22-23 April 1987, Tel-Aviv, Israel 361
Selected abstracts from the Annual Congress of the South African Association of Physicists in Medicine and Biology, 10-13 March 1987, Pretoria, South Africa 357
Selected abstracts of papers presented at the 22nd Annual Meeting of the Japan Health Physics Society, 21-22 May 1987, Tokai-mura, Ibaraki-ken, Japan 365

**Accelerators**
Space Radiation Effects Laboratory, Newport News, VA, results of a radiological survey at 545

**Accidents, power reactor**
Atmospheric release from a nuclear power plant, sheltering--a protective measure 659
Chernobyl, risk of cancer death due to, some thoughts on (letter to the editors) 569
Chernobyl: The End of the Nuclear Dream, edited by N. Hawkes, G. Lean, D. Leigh, R. McKie, P. Pringle and A. Wilson (book review) 355
Coastal dispersion conditions near the southwestern tip of Africa: a system for evaluation and prediction 421
In-vivo measurements of I-131 build-up in human thyroids after Chernobyl 207
Papers about Chernobyl (letter to the editors) 354

**Alabama**
Levels of Rn-222 and its short-lived progeny in houses 89

**ALARA**
Health physics activities in support of the thermal shield removal/disposal and core support barrel repair at the St. Lucie Nuclear Power Plant 189

**Americium-241**
Absorption from the gastrointestinal tracts of rats fed an iron-deficient diet 311
In-vivo counting of in human lungs and tracheobronchial lymph nodes 73
Partitioning in skeleton and liver of U.S. Transuranium Registry autopsy cases 181

**Angular response**
Of personnel dosimeters, two methods of examination 597

**Antennae, broadcasting**
VHF/UHF, theoretical and measured power density in front of 533

**Arc welding**
Ultraviolet radiation emitted from, measurement of 529

**Atomic-bomb survivors**
Atomic-bomb doses, medical x-ray exposure doses as contaminants of 257
Late effects of A-bomb radiation: risk problems unrelated to the new dosimetry (letter to the editors) 567

**Bioeffects**
A Primer on Low-Level Ionizing Radiation and its Biological Effects (AAPM Report No. 18) by Edward W. Webster (book review) 355
**Biokinetics**
Organ distribution pattern of Th in humans, the beagle: an appropriate experimental animal for extrapolation 293
Partitioning of Pu-238, Pu-239 and Am-241 in skeleton and liver of U.S. Transuranium Registry autopsy cases 181
Lung retention and translocation of Pu following the inhalation of plutonium dioxides by CBA/H mice, effect of firing temperature on 301
**Building materials**
Uranium tailings, reply to A.J. Hazle on (letter to the editors) 353

**Calibration**
And field use of a Ge gamma-ray detector, comments on (letter to the editors) 570
**Californium-252**
Monte Carlo calculations of doses to tiles irradiated by, simulating atomic bomb gamma-ray fluences 249
**Canada**
1984 annual radiation doses: lognormal and hybrid lognormal analysis using maximum likelihood estimation 211
Dose rates to aquatic life near a U waste site 63
**Cancer, lung**
Dissociation with a geological outcrop (letter to the editors) 224
Dissociation with a geological outcrop: in reply (letter to the editors) 225
Radon-induced mortality, a retrospective look from the viewpoint of a relative risk model 617
Risk at low doses of alpha particles, reply to Dr. Archer's criticisms of (letter to the editors) 222
**Carbon-14**
Environmental distribution and long-term dispersion around two German nuclear power plants 149
**Carcinogenesis**
Did you write it, Len? Reply to Dr. Sagan (letter to the editors) 226
Early induction of leukemia (malignant lymphoma) in mice by protracted low alpha doses 461
In man after exposure to Rn daughters 27
Late effects of A-bomb radiation: risk problems unrelated to the new dosimetry (letter to the editors) 567
Lung cancer risk at low doses of alpha particles, reply to Dr. Archer's criticisms of (letter to the editors) 222
Radiation hormesis and radiation cancer risk (letter to the editors) 473
The Basic Science of Oncology by Ian F. Tannock and Richard P. Hill (book review) 356
**Cathode ray tubes**
Alleged radiation risks from visual display units 231
**Cesium-137**
Interactions with peat under acidic precipitation conditions 317

**Chernobyl**
Chernobyl: The End of the Nuclear Dream, edited by N. Hawkes, G. Lean, D. Leigh, R. McKie, P. Pringle and A. Wilson (book review) 355
In-vivo measurements of I-131 build-up in human thyroids after the accident 207
Papers about (letter to the editors) 354
Risk of cancer death due to the reactor accident, some thoughts on (letter to the editors) 569
**China, People's Republic of**
Lung cancer risk from Rn in Chinese study, reply to (letter to the editors) 221
**Climatology**
Coastal dispersion conditions near the southwestern tip of Africa: a system for evaluation and prediction 421
**Cobalt-57**
Interactions with peat under acidic precipitation conditions 317
**Cobalt-60**
Monte Carlo calculations of doses to tiles irradiated by, simulating atomic bomb gamma-ray fluences 249
**Collectors, charcoal adsorption**
Adequacy of time averaging with, for Rn-222 measurements in homes 195
**Computer applications**
A spreadsheet method for Sr-90 and Sr-89 interpretation 69
Biomedical Systems Analysis via Compartmental Concept by R.F. Brown (book review) 229
**Corrections**
Correction for: Biological concentration of H-3. Health Phys. 53: 385-388; 1987. 575
Correction for: Calibration of a portable intrinsic Ge gamma-ray detector using point sources and testing for field applications. Health Phys. 51: 53-59; 1986. 575
Correction for: Guidelines on limits of exposure to laser radiation of wavelengths between 180 nm and 1 mm. Health Phys. 49: 341-359; 1985. 575
Correction for: Kocher, D. C.; Eckerman, K. F. Electron dose-rate conversion factors for external exposure of the skin from uniformly deposited activity on the body surface. Health Phys. 53: 135-141; 1987. 233
Correction for: Measurement of C-14 emission rates from a pressurized heavy water reactor. Health Phys. 52:787-791; 1987. 575
Correction for: Shielding design for the ceiling of 6-MV accelerator in an existing facility. Health Physics 52: 491-493; 1987. 575
**Curium-244**
Absorption from the gastrointestinal tracts of rats fed an iron-deficient diet 311

**Dental enamel**
Using to determine radiation exposure from nuclear accidents and atomic tests 469
**Detector, nuclear track**
Solid-state technique, indoor Rn-222 measurements in Sweden with 271
**Detector, radiation**
Calibration and field use of a Ge gamma-ray detector, reply to comments on (letter to the editors) 571

**Detector, radiation** (cont'd)
Electrostatic integrating Rn-222 monitor with cellulose nitrate film 139
Electret dosimeters, long-term stability of 669
**Dogs**
The beagle: an appropriate experimental animal for extrapolating the organ distribution pattern of Th in humans 293
**Dose equivalent**
Doses to patients from diagnostic radiology in France 397
General validity of linear summation for mixed radiations 57
Organ doses from radionuclides on the ground, simple time dependences 617
**Dose, absorbed**
Population radiation, from nuclear medicine procedures in the Netherlands 287
**Dose, atomic-bomb**
Late effects of A-bomb radiation: risk problems unrelated to the new dosimetry (letter to the editors) 567
**Dose, collective**
Doses to patients from diagnostic radiology in France 397
**Dose, external**
Personnel dosimeters, two methods for examining angular response of 597
The four principles of external radiation protection: time, distance, shielding and decay (letter to the editors) 353
**Dose, genetically significant**
Doses to patients from diagnostic radiology in France 397
**Dose, x-ray**
Medical exposures as contaminants of atomic-bomb doses 257
**Dosimeter, electret**
Long-term stability of 669
**Dosimeter, personnel**
Angular response of dosimeters, two methods of examination 597
Film badge and pocket dosimeters for use in nuclear medicine, intercomparison of 557
Intermediate-atomic-number radiation-protection dosimeters irradiated on-phantom in low-energy photon beams, difficulties encountered with 431
**Dosimeter, radiation**
Dental enamel, using to determine radiation exposure from nuclear accidents and atomic tests 469
**Dosimetry**
Neutron dosimetric quantities, comparison of 551
The Dosimetry of Ionizing Radiation. Volume 2 by Kenneth R. Kase, Bengt E. Bjarngard and Frank H. Attix (book review) 229
The potential for irradiation of the lens and cataract induction by incorporated alpha-emitting radionuclides 171
**Dosimetry, thermoluminescent**
Intermediate-atomic-number radiation-protection dosimeters irradiated on-phantom in low-energy photon beams, difficulties encountered with 431

**Effects, biological**
Late effects of A-bomb radiation: risk problems unrelated to the new dosimetry (letter to the editors) 567

**Electromagnetism**
Radiofrequency field exposure limits, IRPA/INIRC reply to comments (letter to the editors) 227
Radiofrequency range of 100 kHz to 300 GHz, guidelines on limits of exposure 115
VHF/UHF broadcasting antennas, theoretical and measured power density in front of 533
Visual display units, alleged radiation risks 231
**Emergency planning**
Accidental atmospheric release from a nuclear power plant, sheltering--a protective measure 659
Coastal dispersion conditions near the southwestern tip of Africa: a system for evaluation and prediction 421
**Emissions, atmospheric**
Accidental release from a nuclear power plant, sheltering--a protective measure 659
Coastal dispersion conditions near the southwestern tip of Africa: a system for evaluation and prediction 421
Environmental distribution and long-term dispersion of reactor carbon-14 dioxide around two German nuclear power plants 149
**Errata**
Correction for: Biological concentration of H-3. Health Phys. 53: 385-388; 1987. 575
Correction for: Calibration of a portable intrinsic Ge gamma-ray detector using point sources and testing for field applications. Health Phys. 51: 53-59; 1986. 575
Correction for: Guidelines on limits of exposure to laser radiation of wavelengths between 180 nm and 1 mm. Health Phys. 49: 341-359; 1985. 575
Correction for: Kocher, D. C.; Eckerman, K. F. Electron dose-rate conversion factors for external exposure of the skin from uniformly deposited activity on the body surface. Health Phys. 53: 135-141; 1987. 233
Correction for: Measurement of C-14 emission rates from a pressurized heavy water reactor. Health Phys. 52:787-791; 1987. 575
Correction for: Shielding design for the ceiling of 6-MV accelerator in an existing facility. Health Physics 52: 491-493; 1987. 575
**Exposure, external**
Organ doses from radionuclides on the ground, simple time dependences 617
**Exposure, medical**
X-ray doses as contaminants of atomic-bomb doses 257
**Exposure, occupational**
Health physics activities in support of the thermal shield removal/disposal and core support barrel repair at the St. Lucie Nuclear Power Plant 189
1984 annual radiation doses in Canada: lognormal and hybrid lognormal analysis using maximum likelihood estimation 211
Phosphorus-32: Practical Radiation Protection by Peter E. Ballance, Lyndon R. Day and Jane Morgan (book review) 230
Power density in front of VHF/UHF broadcasting antennas, theoretical and measured 533

**Exposure, occupational (cont'd)**
Ultraviolet radiation emitted from welding arcs, measurement of 529
Uranium miners' Rn-222 exposure,' necessary update on (letter to the editors) 113
Visual display units, alleged radiation risks 231
**Exposure, radiation**
Determined from nuclear accidents and atomic tests using dental enamel 469

**Fallout**
External gamma exposure from testing at the Nevada Test Site, comments on estimates of (letter to the editors) 674
Inhalation hazard of 645
Papers about Chernobyl (letter to the editors) 354
Sheltering--a protective measure following an accidental atmospheric release from a nuclear power plant 659
**Florida**
Health physics activities in support of the thermal shield removal/disposal and core support barrel repair at the St. Lucie Nuclear Power Plant 189
**Fluence**
Neutron dosimetric quantities,' comparison of 551
Gamma-ray, Monte Carlo calculations of doses to tiles irradiated by Cf-252 and Co-60 simulating atomic bomb 249
**Food chain**
A specific activity effect in the metabolism of Tc 157
Transfer coefficients of selected radionuclides to animal products: comparison of milk and meat from dairy cows and goats 161
Transfer coefficients of selected radionuclides to animal products: hen eggs and meat 167
**France**
Doses to patients from diagnostic radiology 397

**Gastrointestinal tract**
Absorption of U-233, Np-237, Pu-238, Am-241 and Cm-244 in rats fed an iron-deficient diet 311
**Geology**
Dissociation between lung cancer and a geological outcrop (letter to the editors) 224
**Germany, Federal Republic of**
Environmental distribution and long-term dispersion of reactor carbon-14 dioxide around two nuclear power plants 149

**Hazards, ocular**
Irradiation of the lens and cataract induction by incorporated alpha-emitting radionuclides, the potential for 171
Main ionizing and non-ionizing (optical) radiation protection quantities, analogy between the (letter to the editors) 673
Retinal exposures from repetitively pulsed and scanning lasers, evaluation of 337
**Health Physics Society**
1987 Distinguished Scientific Achievement Award--Frank Herbert Attix 9
1987 Distinguished Scientific Achievement Award--Harald H. Rossi 15

**Health Physics Society** (cont'd)
1987 Distinguished Scientific Achievement Award--William C. Roesch 11
1987 Elda E. Anderson Award--Edward T. Lessard 21
1987 Founders Award--John A. Auxier 19
1987 Health Physics Society Student Awards 25
**Hiroshima**
Late effects of A-bomb radiation: risk problems unrelated to the new dosimetry (letter to the editors) 567
Medical x-ray exposure doses as contaminants of atomic-bomb doses 257
Monte Carlo calculations of doses to tiles irradiated by Co-60 and Cf-252 simulating atomic bomb gamma-ray fluences 249
**History of radiation protection**
The Dragon's Tail. Radiation Protection in the Manhattan Project, 1942-1946 by Barton C. Hacker (book review) 475
**Hormesis**
And radiation cancer risk (letter to the editors) 473
Did you write it, Len? Reply to Dr. Sagan (letter to the editors) 226
Radiation hormesis special issue, Comments on the (letter to the editors) 227

**Idaho**
Vertical distribution of soil removed by four species of burrowing rodents in disturbed and undisturbed soils 445
**Imaging**
Doses to patients from diagnostic radiology in France 397
Fitting parameters for medical diagnostic x-ray transmission data 345
Mammography, use of gypsum drywall as shielding material for 465
Photon transmission of monoenergetic broad beams through gypsum wallboard 561
**Immune system**
Early induction of leukemia (malignant lymphoma) in mice by protracted low alpha doses 461
In-vivo counting of Am-241 in human lungs and tracheobronchial lymph nodes 73
**Indoor air quality**
Radon-222 entry rates and indoor concentrations, modeling the effects of exhaust ventilation on 491
**Ingestion**
Absorption of U-233, Np-237, Pu-238, Am-241 and Cm-244 from the gastrointestinal tracts of rats fed an iron-deficient diet 311
Organ distribution pattern of Th in humans, the beagle: an appropriate experimental animal for extrapolation 293
Transfer of aged Pu to cattle grazing on a contaminated environment 323
**Inhalation**
Plutonium dioxides by CBA/H mice, effect of firing temperature on lung retention and translocation of Pu following 301
Hazard of radioactive fallout 645
In-vivo counting of Am-241 in human lungs and tracheobronchial lymph nodes 73
Organ distribution pattern of Th in humans, the beagle: an appropriate experimental animal for extrapolation 293

**International Radiation Protection Association**
Abstracts from the 1987 Annual Meeting of the Israeli Health Physics Society, 22-23 April 1987, Tel-Aviv, Israel 361
Guidelines on limits of exposure to radiofrequency electromagnetic fields in the frequency range from 100 kHz to 300 GHz 115
IRPA 1985 guidelines on limits of exposure to laser radiation, recommendations for minor updates to 573
Selected abstracts from the Annual Congress of the South African Association of Physicists in Medicine and Biology, 10-13 March 1987, Pretoria, South Africa 357
Selected abstracts of papers presented at the 22nd Annual Meeting of the Japan Health Physics Society, 21-22 May 1987, Tokai-mura, Ibaraki-ken, Japan 365
**International System of Units**
Comments on preventing use of 'E' notation in Health Physics submissions (letter to the editors) 351
Standard for expression of powers of 10 (letter to the editors) 352
**Iodine-131**
In-vivo measurements of build-up in human thyroids after the Chernobyl reactor accident 207
**Ions, galactic heavy**
Energy-independent heavy ion transport approximations, an evaluation of 409
**Israel**
Abstracts from the 1987 Annual Meeting of the Israeli Health Physics Society, 22-23 April 1987, Tel-Aviv, Israel 361

**Japan**
Mobile Pu in reservoir sediments of Nagasaki 107
Selected abstracts of papers presented at the 22nd Annual Meeting of the Japan Health Physics Society, 21-22 May 1987, Tokai-mura, Ibaraki-ken, Japan 365

**Lasers**
Limits of exposure to radiation, recommendations for minor updates to the IRPA 1985 guidelines on 573
Repetitively pulsed and scanning, evaluation of retinal exposures from 337
**Lead-212**
Skeletal retention following Ra-224 injection: extrapolation of animal data to adult humans 383
**Leukemia**
Early induction of in mice by protracted low alpha doses 461
**Limits, exposure**
Laser radiation, recommendations for minor updates to the IRPA 1985 guidelines 573
Uranium tailings, reply to A.J. Hazle on (letter to the editors) 353
**Liquid scintillation**
Alpha Counting and Spectrometry Using Liquid Scintillation Methods by W. J. McDowell (book review) 476
**Liver**
Partitioning of Pu-238, Pu-239 and Am-241 in U.S. Transuranium Registry autopsy cases 181
**Lymphoma**
Early induction of leukemia in mice by protracted low alpha doses 461

**Mammography**
Shielding material for, use of gypsum drywall 465
**Manhattan Project**
The Dragon's Tail. Radiation Protection in the Manhattan Project, 1942-1946 by Barton C. Hacker (book review) 475
**Metabolism, differential**
A specific activity effect in the metabolism of Tc 157
**Metabolism, radionuclide**
A specific activity effect in Tc 157
Transfer coefficients of selected radionuclides to animal products: comparison of milk and meat from dairy cows and goats 161
Transfer coefficients of selected radionuclides to animal products: hen eggs and meat 167
**Microdosimetry**
Radium-224 in murine compact and cancellous bone, a Monte-Carlo approach 607
The Dosimetry of Ionizing Radiation. Volume 2 by Kenneth R. Kase, Bengt E. Bjarngard and Frank H. Attix (book review) 229
**Mining, uranium**
Necessary update on Rn-222 exposure (letter to the editors) 113
Uranium tailings, reply to A.J. Hazle on (letter to the editors) 353
**Missouri**
Results of indoor Rn monitoring (letter to the editors) 354
**Models**
Biomedical Systems Analysis via Compartmental Concept by R.F. Brown (book review) 229
Effects of exhaust ventilation on Rn-222 entry rates and indoor Rn-222 concentrations 491
1984 annual radiation doses in Canada: lognormal and hybrid lognormal analysis using maximum likelihood estimation 211
Relative-risk, a retrospective look at Rn-induced lung cancer mortality from the viewpoint of 617
Transfer of aged Pu to cattle grazing on a contaminated environment 323
**Monitoring, environmental**
An electrostatic integrating Rn-222 monitor with cellulose nitrate film 139
Continuous monitoring for airborne alpha emitters in a dusty environment 503
Electret passive Rn-222, based on ionization measurement 47
Indoor Rn-222 measurements in Sweden with the solid-state nuclear track detector technique 271
Indoor Rn in Missouri, results of (letter to the editors) 354
**Monitors, electret**
Passive environmental Rn-222, based on ionization measurement 47
**Monte Carlo**
Calculations of doses to tiles irradiated by Co-60 and Cf-252 simulating atomic bomb gamma-ray fluences 249
Microdosimetry of Ra-224 in murine compact and cancellous bone 607

**Nagasaki**
Late effects of A-bomb radiation: risk problems unrelated to the new dosimetry (letter to the editors) 567

**Nagasaki** (cont'd)
Medical x-ray exposure doses as contaminants of atomic-bomb doses 257
Mobile Pu in reservoir sediments' 107
Monte Carlo calculations of doses to tiles irradiated by Co-60 and Cf-252 simulating atomic bomb gamma-ray fluences 249
**Neptunium-237**
Absorption from the gastrointestinal tracts of rats fed an iron-deficient diet 311
**Netherlands**
Population radiation absorbed dose from nuclear medicine procedures 287
**Neutrons**
A soft-tissue-substitute liquid 349
Dosimetric quantities, comparison of 551
**Nevada Test Site**
External gamma exposure from testing, comments on estimates of (letter to the editors) 674
Transfer of aged Pu to cattle grazing on a contaminated environment 323
**Nuclear medicine**
Film badge and pocket dosimeters for use in, intercomparison of 557
Physics in Nuclear Medicine by J.A. Sorensen and M.E. Phelps (book review) 475
Procedures in the Netherlands, population radiation absorbed dose from 287
Selected abstracts from the Annual Congress of the South African Association of Physicists in Medicine and Biology, 10-13 March 1987, Pretoria, South Africa 357
**Nutrition pathway**
A specific activity effect in the metabolism of Tc 157
Cattle grazing on a contaminated environment, transfer of aged Pu to 323
Transfer coefficients of selected radionuclides to animal products: comparison of milk and meat from dairy cows and goats 161
Transfer coefficients of selected radionuclides to animal products: hen eggs and meat 167

**Oncology**
The Basic Science of Oncology by Ian F. Tannock and Richard P. Hill (book review) 356

**Peat**
Interactions with Co-57, Sr-85 and Cs-137 under acidic precipitation conditions 317
**Phantom**
On-phantom irradiation in low-energy photon beams of intermediate-atomic-number radiation-protection dosimeters, difficulties encountered with 431
Organ doses from radionuclides on the ground, simple time dependences 617
Two methods for examining angular response of personnel dosimeters 597
**Phosphorus-32**
Phosphorus-32: Practical Radiation Protection by Peter E. Ballance, Lyndon R. Day and Jane Morgan (book review) 230

**Photometry**
Main ionizing and non-ionizing (optical) radiation protection quantities, analogy between the (letter to the editors) 673
**Photons**
Laser radiation, recommendations for minor updates to the IRPA 1985 guidelines on 573
Organ doses from radionuclides on the ground, simple time dependences 617
Repetitively pulsed and scanning lasers, evaluation of retinal exposures from 337
**Photons, low-energy**
On-phantom irradiation of intermediate-atomic-number radiation-protection dosimeters, difficulties encountered with 431
**Plant uptake**
Transfer from soil of Ru-106 as nitrosyl and as chloride 83
**Plutonium**
Aged, transfer to cattle grazing on a contaminated environment 323
Continuous monitoring for airborne alpha emitters in a dusty environment 503
Inhalation of by CBA/H mice, effect of firing temperature on lung retention and translocation of 301
Mobile, in reservoir sediments of Nagasaki, Japan 107
Partitioning in skeleton and liver of U.S. Transuranium Registry autopsy cases 181
Potential for irradiation of the lens and cataract induction by incorporated alpha-emitting radionuclides 171
**Plutonium-238**
Absorption from the gastrointestinal tracts of rats fed an iron-deficient diet 311
**Power plant, nuclear**
Accidental atmospheric release, sheltering--a protective measure 659
Environmental distribution and long-term dispersion of reactor carbon-14 dioxide around two German plants 149
Thermal shield removal/disposal and core support barrel repair at the St. Lucie plant 189
**Primates**
Evaluation of retinal exposures from repetitively pulsed and scanning lasers 337
**Public information**
A new intellectual atmosphere (guest editorial) 589

**Quantities, radiation**
Main ionizing and non-ionizing (optical) radiation protection quantities, analogy between the (letter to the editors) 673
Radiation protection quantities, reply to comments on (letter to the editors) 674

**Radiation, alpha**
Alpha Counting and Spectrometry Using Liquid Scintillation Methods by W. J. McDowell (book review) 476
Continuous monitoring for airborne emitters in a dusty environment 503
Emitting radionuclides, potential for irradiation of the lens and cataract induction by incorporated 171

**Radiation, alpha (cont'd)**
Lung cancer risk at low doses of, reply to Dr. Archer's criticisms of (letter to the editors) 222
Protracted low doses, early induction of leukemia (malignant lymphoma) in mice by 461
**Radiation, gamma**
Calibration and field use of a Ge detector, reply to comments on (letter to the editors) 571
External dose rates from Rn-222 progeny indoors 203
External exposure from testing at the Nevada Test Site, comments on estimates of (letter to the editors) 674
Simulating atomic-bomb fluences, Monte Carlo calculations of doses to tiles irradiated by Co-60 and Cf-252 249
**Radiation, low-level**
A Primer on Low-Level Ionizing Radiation and its Biological Effects (AAPM Report No. 18) by Edward W. Webster (book review) 355
Low doses may have zero risk of harm, tell policymakers that (letter to the editors) 565
Protracted low alpha doses, early induction of leukemia (malignant lymphoma) in mice by 461
**Radiation, non-ionizing**
Alleged risks from visual display units 231
Evaluation of retinal exposures from repetitively pulsed and scanning lasers 337
Laser radiation, recommendations for minor updates to the IRPA 1985 guidelines on limits of exposure to 573
Radiofrequency electromagnetic field exposure limits, IRPA/INIRC reply to comments about (letter to the editors) 227
Radiofrequency range of 100 kHz to 300 GHz, guidelines on limits of exposure to 115
Tissue Characterization with Ultrasound. Volumes 1 and 2 edited by James F. Greenleaf (book review) 230
Ultraviolet emissions from welding arcs, measurement of 529
VHF/UHF broadcasting antennas, theoretical and measured power density in front of 533
**Radiation, ultraviolet**
Welding arcs, measurement of emissions from 529
**Radiations, mixed**
General validity of linear summation of dose equivalents 57
**Radioactivity, airborne**
Coastal dispersion conditions near the southwestern tip of Africa: a system for evaluation and prediction 421
Continuous monitoring for airborne alpha emitters in a dusty environment 503
Environmental distribution and long-term dispersion of reactor carbon-14 dioxide around two German nuclear power plants 149
Fallout, inhalation hazard of 645
Sheltering--a protective measure following an accidental release from a nuclear power plant 659
**Radioactivity, induced**
Radiological survey at the Space Radiation Effects Laboratory, Newport News, VA, results of 545
**Radioactivity, natural**
Dissociation between lung cancer and a geological outcrop: in reply (letter to the editor) 225

**Radiofrequency**
Guidelines on limits of exposure to electromagnetic fields in the frequency range from 100 kHz to 300 GHz 115
IRPA/INIRC reply to comments about electromagnetic field exposure limits (letter to the editors) 227
VHF/UHF broadcasting antennas, theoretical and measured power density in front of 533
**Radiology, diagnostic**
Doses to patients from, in France 397
**Radium**
Acquired in adolescence or young adulthood, post menopausal loss of quantitative relationship to radiation-induced skeletal damage and dosimetric implications 517
Incorporated alpha-emitting radionuclides, the potential for irradiation of the lens and cataract induction by 171
**Radium-224**
Microdosimetry of in murine compact and cancellous bone, a Monte-Carlo approach 607
Skeletal Pb-212 retention following Ra-224 injection: extrapolation of animal data to adult humans 383
**Radium-226**
Dose rates to aquatic life near a U waste site 63
Radioactive and nonradioactive solutes in drinking water from Rn-charging devices 99
**Radon**
Dissociation between lung cancer and a geological outcrop (letter to the editors) 224
Dissociation between lung cancer and a geological outcrop: in reply (letter to the editor) 225
Lung cancer risk from in Chinese study, reply to (letter to the editors) 221
Proposed criteria to define prone areas from regional surveys 351
Uranium tailings, reply to A.J. Hazle on (letter to the editors) 353
**Radon daughters**
Cancer in man after exposure to 27
Continuous monitoring for airborne alpha emitters in a dusty environment 503
External gamma-ray dose rates from, indoors 203
Indoor concentrations of Rn-220 and 283
Levels of Rn-222 and short-lived progeny in Alabama houses 89
**Radon, indoor**
Adequacy of time averaging with diffusion barrier charcoal adsorption collectors 195
Concentrations of, and decay products 283
Entry rates and concentrations, modeling the effects of exhaust ventilation on 491
External gamma-ray dose rates from Rn-222 progeny 203
Levels in Alabama houses 89
Lung cancer mortality, a retrospective look from the viewpoint of a relative risk model 617
Lung cancer risk from in Chinese study, reply to (letter to the editors) 221
Measurements in Sweden with the solid-state nuclear track detector technique 271
Monitoring in Missouri, results of (letter to the editors) 354

**Radon-220**
Effect of selected variables on airborne progeny concentrations 93
Indoor concentrations of, and its decay products 283
**Radon-222**
Adequacy of time averaging with diffusion barrier charcoal adsorption collectors for measurements in homes 195
Dissociation between lung cancer and a geological outcrop: in reply (letter to the editor) 225
Effect of selected variables on airborne progeny concentrations 93
Electret passive environmental monitor based on ionization measurement 47
Electrostatic integrating monitor with cellulose nitrate film for environmental monitoring 139
External gamma-ray dose rates from progeny indoors 203
Indoor concentrations and entry rates, modeling the effects of exhaust ventilation on 491
Indoor measurements in Sweden with the solid-state nuclear track detector technique 271
Levels and short-lived progeny in Alabama houses 89
Necessary update on U miners' exposure (letter to the editors) 113
Radioactive and nonradioactive solutes in drinking water from charging devices 99
**Reactor, light-water**
Thermal shield removal/disposal and core support barrel repair at the St. Lucie power plant 189
**Reading Prong**
Dissociation between lung cancer and a geological outcrop (letter to the editors) 224
**Respiratory system**
In-vivo counting of Am-241 in human lungs and tracheobronchial lymph nodes 73
Inhalation hazard of radioactive fallout 645
Lung retention and translocation of Pu following the inhalation of plutonium dioxides by CBA/H mice, the effect of firing temperature on 301
Radon-induced lung cancer mortality, a retrospective look from the viewpoint of a relative risk model 617
**Risk analysis**
Late effects of A-bomb radiation: risk problems unrelated to the new dosimetry (letter to the editors) 567
Lung cancer risk from Rn in Chinese study, reply to (letter to the editors) 221
Postmenopausal loss of Ra acquired in adolescence or young adulthood: quantitative relationship to radiation-induced skeletal damage and dosimetric implications 517
Radiation hormesis and radiation cancer risk (letter to the editors) 473
Risk of cancer death due to the Chernobyl reactor accident, some thoughts on (letter to the editors) 569
Science, evidence and regulation (letter to the editors) 566
Tell policymakers that low doses of ionizing radiation may have zero risk of harm (letter to the editors) 565
**Risk, relative**
Model, a retrospective look at Rn-induced lung cancer mortality from the viewpoint of 617

**Rodents**
A Monte-Carlo approach to the microdosimetry of Ra-224 in murine compact and cancellous bone 607
Absorption of U-233, Np-237, Pu-238, Am-241 and Cm-244 from the gastrointestinal tracts of rats fed an iron-deficient diet 311
Burrowing, vertical distribution of soil removed by four species in disturbed and undisturbed soils 445
CBA/H mice, the effect of firing temperature on the lung retention and translocation of Pu following the inhalation of plutonium dioxides by 301
Early induction of leukemia (malignant lymphoma) in mice by protracted low alpha doses 461
**Ruthenium-106**
Transfer from soil to plants as nitrosyl and as chloride 83

**Safety standards**
Four principles of external radiation protection: time, distance, shielding and decay (letter to the editors) 353
Main ionizing and non-ionizing (optical) radiation protection quantities, analogy between the (letter to the editors) 673
Phosphorus-32: Practical Radiation Protection by Peter E. Ballance, Lyndon R. Day and Jane Morgan (book review) 230
Radiation protection quantities, reply to comments on (letter to the editors) 674
Recommendations for minor updates to the IRPA 1985 guidelines on limits of exposure to laser radiation 573
Science, evidence and regulation (letter to the editors) 566
**Scattering**
Difficulties encountered with some intermediate-atomic-number radiation-protection dosimeters irradiated on-phantom in low-energy photon beams 431
**Shielding**
An evaluation of energy-independent heavy ion transport approximations 409
Gypsum wallboard, photon transmission of monoenergetic broad beams through 561
Use of gypsum drywall for mammography 465
**Skeleton**
Lead-212 retention following Ra-224 injection: extrapolation of animal data to adult humans 383
Murine compact and cancellous bone, Monte-Carlo approach to the microdosimetry of Ra-224 in 607
Organ distribution pattern of Th in humans, the beagle: an appropriate experimental animal for extrapolation 293
Partitioning of Pu-238, Pu-239 and Am-241 in U.S. Transuranium Registry autopsy cases 181
Radiation-induced damage and dosimetric implications, postmenopausal loss of Ra acquired in adolescence or young adulthood: quantitative relationship to 517
**Soft tissue**
A substitute liquid 349
Organ distribution pattern of Th in humans, the beagle: an appropriate experimental animal for extrapolation 293

**Soil**
Disturbed and undisturbed, vertical distribution of soil removed by four species of burrowing rodents 445
High-quality spiked soil standards, preparation and analysis of 451
**South Africa**
Coastal dispersion conditions near the southwestern tip of Africa: a system for evaluation and prediction 421
Selected abstracts from the Annual Congress of the South African Association of Physicists in Medicine and Biology, 10-13 March 1987, Pretoria, South Africa 357
**Space shuttle, station**
An evaluation of energy-independent heavy ion transport approximations 409
**Spectra**
Comparison of neutron dosimetric quantities 551
**Spectrometry, alpha**
Alpha Counting and Spectrometry Using Liquid Scintillation Methods by W. J. McDowell (book review) 476
**Spectroscopy, neutron**
The Dosimetry of Ionizing Radiation. Volume 2 by Kenneth R. Kase, Bengt E. Bjarngard and Frank H. Attix (book review) 229
**Standard, soil**
High-quality spiked soil standards, preparation and analysis of 451
**Strontium-85**
Interactions with peat under acidic precipitation conditions 317
**Strontium-89**
A spreadsheet method for interpretation of 69
**Strontium-90**
A spreadsheet method for interpretation of 69
**Sweden**
Indoor Ra-222 measurements with the solid-state nuclear track detector technique 271

**Tailings, uranium mill**
Reply to A.J. Hazle on (letter to the editors) 353
**Technetium**
A specific activity effect in the metabolism of 157
Transfer coefficients of selected radionuclides to animal products: comparison of milk and meat from dairy cows and goats 161
Transfer coefficients of selected radionuclides to animal products: hen eggs and meat 167
**Thorium**
Comparative uptake by native plants at a U production site 413
Organ distribution pattern in humans, the beagle: an appropriate experimental animal for extrapolation 293
**Thyroids**
In-vivo measurements of I-131 build-up in humans after the Chernobyl reactor accident 207
**Tissue substitute**
Soft, liquid substitute 349
**Transfer coefficient**
A specific activity effect in the metabolism of Tc 157
Energy-independent heavy ion transport approximations, an evaluation of 409
Of aged Pu to cattle grazing on a contaminated environment 323

**Transfer coefficient (cont'd)**
Selected radionuclides to animal products: comparison of milk and meat from dairy cows and goats 161
Selected radionuclides to animal products: hen eggs and meat 167
**Transport, environmental**
A specific activity effect in the metabolism of Tc 157
Accidental atmospheric release from a nuclear power plant, sheltering--a protective measure 659
Aged Pu to cattle grazing on a contaminated environment 323
Coastal dispersion conditions near the southwestern tip of Africa: a system for evaluation and prediction 421
External gamma exposure from testing at the Nevada Test Site, comments on estimates of (letter to the editors) 674
From soil to plants of Ru-106 as nitrosyl and as chloride 83
Inhalation hazard of radioactive fallout 645
Interactions of Co-57, Sr-85 and Cs-137 with peat under acidic precipitation conditions 317
Long-term dispersion of reactor carbon-14 dioxide around two German nuclear power plants 149
Mobile Pu in reservoir sediments of Nagasaki, Japan 107
Organ doses from radionuclides on the ground, simple time dependences 617
Papers about Chernobyl (letter to the editors) 354
Selected radionuclides to animal products: comparison of milk and meat from dairy cows and goats 161
Selected radionuclides to animal products: hen eggs and meat 167
Vertical distribution of soil removed by four species of burrowing rodents in disturbed and undisturbed soils 445

**Ultrasound**
Tissue Characterization with Ultrasound. Volumes 1 and 2 edited by James F. Greenleaf (book review) 230
**Units, radiation**
Main ionizing and non-ionizing (optical) radiation protection quantities, analogy between the (letter to the editors) 673
**Uptake, plant**
Comparative uptake of U and Th at a U production site 413
Interactions of Co-57, Sr-85 and Cs-137 with peat under acidic precipitation conditions 317
**Uranium**
Comparative uptake by native plants at a production site 413
**Uranium processing**
Comparative uptake of U and Th by native plants at a U production site 413
**Uranium-233**
Absorption from the gastrointestinal tracts of rats fed an iron-deficient diet 311

**Vanadium**
Radioactive and nonradioactive solutes in drinking water from Rn-charging devices 99

**Ventilation**
Exhaust, modeling the effects on Rn-222 entry rates and indoor concentrations 491
**Visual display units**
Alleged radiation risks from 231
**Waste disposal**
Dose rates to aquatic life near a U waste site 63
Thermal shield removal/disposal and core support barrel repair at the St. Lucie Nuclear Power Plant 189
U tailings, reply to A.J. Hazle on (letter to the editors) 353
Vertical distribution of soil removed by four species of burrowing rodents in disturbed and undisturbed soils 445
**Water, drinking**
Radioactive and nonradioactive solutes in, from Rn-charging devices 99
**Water, fresh**
Dose rates to aquatic life near a U waste site 63
**Weapons**
Nevada Test Site, comments on estimates of external gamma exposure from testing at (letter to the editors) 674
**Weapons, nuclear**
The Dragon's Tail. Radiation Protection in the Manhattan Project, 1942-1946 by Barton C. Hacker (book review) 475

**X rays**
Doses to patients from diagnostic radiology in France 397
Mammography, use of gypsum drywall as shielding material for 465
Medical diagnostic, fitting parameters for transmission data 345
Monoenergetic broad beams through gypsum wallboard, photon transmission of 561